

विषय : General Module

प्रत्येक Section को उत्तर छुट्टाछुट्टै उत्तरपुस्तिकामा लेख्नुपर्नेछ । अन्यथा उत्तरपुस्तिका रद्द हुनेछ ।

Time : 1 Hour 35 Minutes

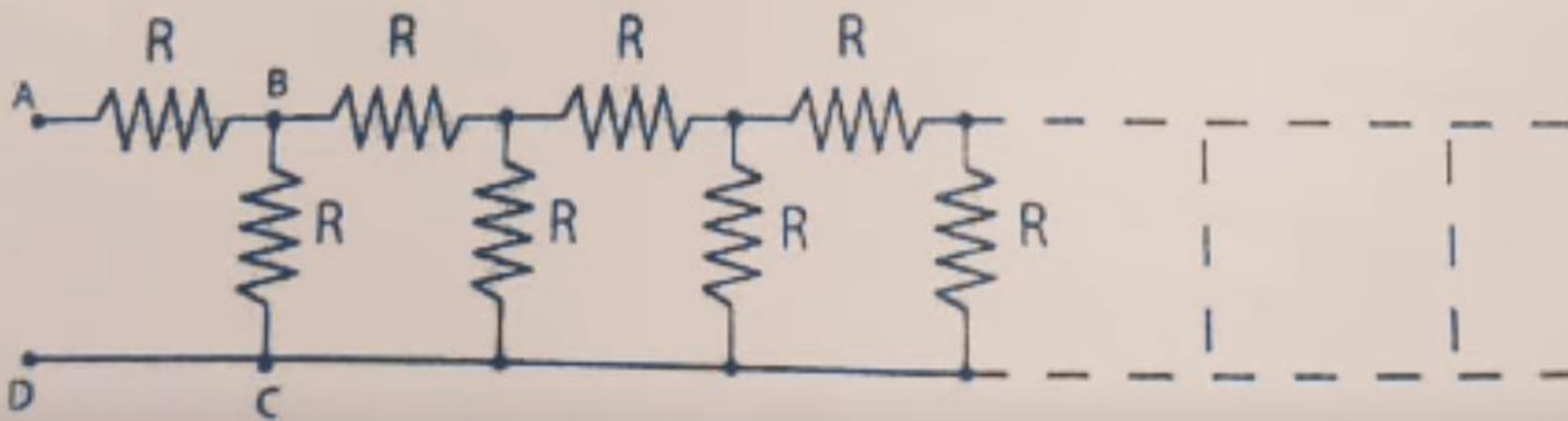
Subjective

44 Marks

Section 'A'

1. Describe Amplitude Modulation and how does it differ from Frequency Modulation? State. 4
2. Let $f(x)$ be the function of period $2L = 4$ which is given on the interval $(-2, 2)$ by

$$f(x) = \begin{cases} 0 & -2 < x < 0 \\ 2 - x & 0 < x < 2 \end{cases}$$
 Find the value of a_n , the coefficient of $\cos nx$. 4
3. According to Newton's Gravitational law, which forces have to be considered and balanced for orbiting satellite to the Earth and why? 4
4. What is the mapping procedures adopted in the organization of Cache Memory? List and define the terms in which the performance of Cache Memory is frequently measured. 2+2=4
5. What is an Op-Amp? List the main characteristics of the ideal case of operational amplifier. 4
6. Find the equivalent resistance between the points A and D of the infinite ladder shown in the figure below. 4



ईन्जिनियर (सिभिल)/टेलिकम ईन्जिनियर (इलेक्ट्रिकल/कम्प्युटर/इलेक्ट्रिकल) - २

8. Water is flowing from a garden hose. A man places his thumb to cover most of the hose outlet, causing a thin jet of high-speed water to spray. The pressure in the hose just upstream of his thumb is 400 kPa. If the hose is held upward, what is the maximum height that the jet could achieve? Also state the valid assumptions with justifications to simplify the problem (if any).
- 10

Section 'B'

26 Marks

9. ईन्जिनियरिङ्ग अर्थशास्त्र (Engineering Economics) भन्नाले के बुझिन्छ ? नेपाल टेलिकममा यसको उपयोग कसरी गर्न सकिन्छ ? संक्षेपमा उल्लेख गर्नुहोस् ।
- 8
10. Explain the concept of liquidated damages in the context of procurement contract management.
- 4
11. How can PERT and CPM helpful in project planning? State.
- 4
12. What is the provision of right to use land for installation of telecommunication as per the Telecommunication Act, 2053? State.
- 4
13. आउट सोर्सिङ्ग (Outsourcing) लाई वर्तमान व्यवस्थापन प्रणालीमा महत्त्व दिन थालिएको छ । यसको अर्थ र फाइदा बताउँदै नेपाल टेलिकमले प्रदान गर्ने सेवाहरूमध्ये के-कस्ता सेवाहरू आउट सोर्स गर्नु उपयुक्त होला ? सुक्ष्म रूपमा लेख्नुहोस् ।
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